

## DOCUMENT RESUME

ED 359 941

IR 016 162

AUTHOR Frasca, Joseph W.  
TITLE Introduction to Computing: Lab Manual. Faculty Guide [and] Student Guide.  
INSTITUTION Sonoma State Univ., Rohnert Park, CA.  
PUB DATE 90  
NOTE 78p.; The two documents combined here are part of a collection produced under the auspices of the California State University Institute for Teaching and Learning. The CSU/ITL, created in 1988, facilitates a 20-campus systemwide network of faculty affiliates in response to the demand for improved teaching and learning in the college classroom.  
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Guides - Classroom Use - Instructional Materials (For Learner) (051)  
EDRS PRICE MF01/PC04 Plus Postage.  
DESCRIPTORS \*Computer Assisted Instruction; Computer Graphics; \*Computer Literacy; Computer Science Education; Computer Software; Electronic Mail; Higher Education; Introductory Courses; Laboratories; Laboratory Manuals; Programing Languages  
IDENTIFIERS Apple IIe; Apple Macintosh; California State University Inst for Teach Learn; \*College Teaching and Learning Collection

## ABSTRACT

This lab manual is designed to accompany a college course introducing students to computing. The exercises are designed to be completed by the average student in a supervised 2-hour block of time at a computer lab over 15 weeks. The intent of each lab session is to introduce a topic and have the student feel comfortable with the use of the machine and the particular software. The faculty guide supplies the instructions for each of the 15 labs. The lab topics are as follows: (1) introduction to electronic mail; (2) introduction to the Macintosh SE/II computer; (3) Macintosh SE/II orientation; (4) Macintosh SE/II WORKS/wordprocessing orientation; (5) WORKS/database applications; (6) WORKS/spreadsheet applications; (7) integrated WORKS; (8) general Macintosh applications; (9) Macintosh graphics applications; (10) Hypercard and videodisc applications; (11) introduction to the Apple IIe/Apple GS; (12) introduction to Apple DOS/system utilities; (13) Apple IIe languages (BASIC and LOGO); (14) Apple IIe/GS software and documentation evaluation; and (15) how to buy a computer [and] computer ethics. (MES)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

ED359941

120122

# Introduction to Computing

LAB MANUAL

Faculty Guide



Sonoma State University

Instructional Development and Technology Program  
Lottery 1989-90

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

☒ This document has been reproduced as  
received from the person or organization  
originating it.

☐ Minor changes have been made to improve  
reproduction quality.

• Points of view or opinions stated in this docu-  
ment do not necessarily represent official  
OEI position or policy.

Dr. J.W. Frasca, Project Director  
Professor, Computer Science

PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

California State  
University

Donna M. Tapella, Graphic Artist  
CIS 175 Computer Graphics

BEST COPY AVAILABLE

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)

CSU Institute for Teaching and Learning  
and  
ERIC Clearinghouse on Higher Education

The California State University Institute for Teaching and Learning (CSU/ITL) facilitates a 20-campus network of teaching and learning programs in the CSU system. ERIC/HE has entered into an agreement with CSU/ITL to process documents produced by the system and create a mini-collection within the ERIC database.

Major objectives of this initiative are as follows:

- increase awareness of the work of the CSU Institute for Teaching and Learning;
- increase access to the work of CSU/ITL affiliates;
- begin to build a subset of information on teaching and learning that supports *The National Teaching and Learning Forum (NTLF)*, ERIC/HE's newsletter;
- encourage use of the ERIC system by CSU/ITL member affiliates and the *NTLF* readership; and
- test a model for collaboration between ERIC/HE and a major higher education system.

All CSU/ITL ERIC RIE citations are tagged with the following identifiers appearing in the IDEN:Field:

- College Teaching and Learning Collection; and
- California State University for Teaching and Learning.

All CSU/ITL citations carry the following statement in the Note Field:

This document is part of a collection produced under the auspices of the California State University Institute for Teaching and Learning. The CSU/ITL, created in 1988, facilitates a 20-campus systemwide network of faculty affiliates in response to the demand for improved teaching and learning in the college classroom.

## PREFACE

The exercises in the Student Manual are designed to be completed by the average (grade of 'C' or better) college student in a supervised two hour block of time with approximately ten to fifteen minutes for a break. Each of the fifteen labs was taught by University faculty as opposed to a lab assistant, an important consideration for the faculty and students on the Sonoma campus. Students have indicated that they want faculty in the lab to answer questions and provide supervised help. Each lab exercise activity was evaluated by the instructor and assigned a grade of CR/NC; if a student did not finish the lab activity but it was turned in before the next lab period, credit was given. The intent of each lab was to introduce a topic and have the student feel comfortable with the use of the machine and the particular software.

The exercises are identified (see Table of Contents -Student Manual) as Labs 0 through 14. The fifteen labs were done in the order that they appear over the course of a fifteen week semester. The manuals are three-ring punched so that individual lab activities can be moved depending on the order a lab instructor might choose. The faculty guide supplies instructions for each of the fifteen labs.

There are references in several of the labs to a lab 'manual' which included a DOS exercise and selected sample programs in BASIC and LOGO. This 'manual' was not included with the workbook since it will no longer be used plus individual instructors preferred to use their own material for these exercises.

Dr. Joseph W Frasca  
Copyright 1990

## **TABLE OF CONTENTS**

|               |                                                           |
|---------------|-----------------------------------------------------------|
| <b>LAB 0</b>  | <b>Introduction to Electronic Mail</b>                    |
| <b>Lab 1</b>  | <b>Introduction to the Macintosh Computer SE/II</b>       |
| <b>Lab 2</b>  | <b>Macintosh Orientation SE/II</b>                        |
| <b>Lab 3</b>  | <b>Macintosh Orientation SE/II - WORKS/wordprocessing</b> |
| <b>Lab 4</b>  | <b>Applications-WORKS/database</b>                        |
| <b>Lab 5</b>  | <b>Applications-WORKS/spreadsheet</b>                     |
| <b>Lab 6</b>  | <b>Integrated WORKS</b>                                   |
| <b>Lab 7</b>  | <b>Macintosh Applications-General</b>                     |
| <b>Lab 8</b>  | <b>Macintosh Applications-Graphics</b>                    |
| <b>Lab 9</b>  | <b>Macintosh Applications-Hypercard &amp; Videodisc</b>   |
| <b>Lab 10</b> | <b>Introduction to the Apple IIe/Apple GS</b>             |
| <b>Lab 11</b> | <b>Introduction to Apple DOS/system utilities</b>         |
| <b>Lab 12</b> | <b>Apple IIe Languages-BASIC &amp; LOGO</b>               |
| <b>Lab 13</b> | <b>Apple IIe/GS Software/Documentation Evaluation</b>     |
| <b>Lab 14</b> | <b>How to Purchase a Computer; Computer Ethics</b>        |

# LAB 0 COMPUTER SCIENCE 101

## INTRODUCTION TO ELECTRONIC MAIL

### Faculty Instructions

1. Check roll, explain grading, expectations, purpose of lab, office hours, etc. 20 min
2. Complete a tour of University Computer facilities; take students through machine room. Point out types of computers, basic components. 20 min
3. Complete the VAX electronic mail exercise (attached). 65 min

Lab Time 1.75 Hr

Break .25 Hr

Dr. Frasca  
Professor, Computer Science

Week 1

# LAB 1 COMPUTER SCIENCE 101

## INTRODUCTION TO MACINTOSH COMPUTER

### Faculty Instructions

1. Check roll, explain use of lab (Id cards, etc.). 10 min
2. Show students how to turn machine on/off, use mouse, click, drag, what a icon is, how to load/boot a disk, run an application from the desktop. 20 min  
  
(You may want to use the Data Show for this--if you do you must get the SE lab drawer key from the computer center operator.)
3. Complete the VAX electronic mail exercise. 10 min
4. Have students complete the "Guided Tour" (either disk or on-line) If you are in the SE lab you will need the lab drawer key to get to all 19 "Tour" disks -- check out key from computer center operator. 50 min
5. Have students complete the worksheet at the end of the exercise. They can turn it in at the end of class or the beginning of lab next week. 15 min

If there is any time left they can start the "Tour" a second time.

Lab Time 1.75 Hr  
Break .25 Hr

Dr. Frasca  
Professor, Computer Science

Week 2

# LAB 2 COMPUTER SCIENCE 101

## MACINTOSH OPERATION

### Faculty Instructions

1. Check roll.
2. Go over answer sheet from last week; answer questions from sheet by using the data show. (This will act as good review for the students.) 25 min
3. Discuss how to handle a disk; ID its parts, demo how to put into drive; how to lock and unlock. Using the Data Show indicate how to initialize and name a disk. Re-initialize the disk again, show them how to change the name of the disk icon. 10 min
4. Now have the students initialize their data disk and name and rename it (will not be able to rename on the desktop in the SE lab). Have them change the name once or twice. Have each student do this. 10 min
5. Using the Data Show go into WORKS and create a short document; save it to your data disk (stress use of the DRIVE button to ensure that they don't save to the hard disk)-demo the use of SAVE and SAVE AS; show how to eject the disk. Demo how to bring a file in and do editing and save it again. 10 min  
(If using the Mac II lab, you may want to not load multifinder.)
6. Now demo again. Close off all windows and show them how to access the lab printers (Imagewriter only for now). Select a printer; open WORKS, bring in your document that was created earlier, and print it. Have them refer to the lab manual if necessary (there will be some minor differences between the II and SE lab). 5 min
7. Demo how to access the overview tutorial on WORKS called A WORKS TOUR (it is a Hypercard stack in the WORKS folder-MAC II--SE-just click on STATION ICON). Have the students follow along with you on this.
8. Let students run that tour -- just the first two parts (The INTRODUCTION to WORKS and the WORDPROCESSING sections). 30 min
9. Let the students create and save a short background letter and save it as LETTER! 5 min

Lab Time 1.75 Hr  
Break .25 Hr

Dr. Frasca  
Professor, Computer Science

Week 3

# LAB 3 COMPUTER SCIENCE 101

## WORDPROCESSING/MACINTOSH Microsoft WORKS

### Faculty Instructions

1. Check roll.
2. Collect database information for next week (see my sample roster attached -- this information will be used in a database exercise -- explain each item and the intent for use next week in setting up a database). Gather data on each student: age, height, weight, hobby, and their 'home'. 20 min
3. Show students (using the Data Show) how to access the Hypercard Microsoft Works tutorial. Take them through the entire process to the point where the wordprocessing file is open on the desktop. (Do this as a review from last week-remember, they have done the tutorial.) 10 min
4. Now let the students do the tutorial -- (if they feel they need to do it again). 30 min
5. Now let them create a letter addressing the issue of ... "its OK to copy software". Encourage them to use several features of the package (where appropriate) like font selection, style, ruler, tabs, spell check, etc. The letter should be at least one to 1-1/2 pages long. 20 min
6. Have them do a second document that describes a vacation and their favorite pet -- have them include a drawing of the pet. 20 min
7. Let them print their letters and turn a copy in to you.

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 4

# LAB 4 COMPUTER SCIENCE 101

## DATABASE/MACINTOSH Microsoft WORKS

### Faculty Instructions

1. Check roll. MacII - (TURN OFF MULTIFINDER) and pass out database roster information which you collected last week. Make sure each student has a copy.
2. Using the Data Show demonstrate to the students how to access WORKS and the database segment. Do a short demo by entering 5 records from the student data you collected last week from the class. Show how the columns can be changed, the width altered, how to insert a new record, delete a record, and change a field of information. Once completed, demonstrate how to set selection criteria and establish rules. Now generate a report base on the set of criteria that has been selected. Answer any questions.  
30 min
3. Now let the students do the Hypercard tutorial for WORKS (the Database section) -- you will need to go around and help them to open everything. Have them do the entire database tutorial.  
30 min
4. Once they have finished the tutorial give out the database (student lab data) information and have each student enter it and save it on their data disk. Have them enter all 20 records. 30 min
5. Have each student generate database reports based on the criterion in the LAB TASK section of the assignment. 15 min

You may want to talk about the use of AND, OR, NOT in the context of record selection before they try to do student generated database reports (class roster data).

Have them refer to their WORKS QUICK REFERENCE GUIDE when they need help.

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 5

# LAB 5 COMPUTER SCIENCE 101

## SPREADSHEET/MACINTOSH Microsoft WORKS

### Faculty Instructions

1. Check roll.
2. Show the students a sample spreadsheet (the CIS 101 Spring 90 Tally is good) and how it works with formulas (show them cells, how to enter, a cut-paste); when finished, show them how to access the HYPERCARD WORKS TUTORIAL -- A WORKS TOUR.  
15 min
3. Now let the students do the tutorial. 30 min
4. Let each of them create their own spreadsheet:  
A. A vacation budget  
B. Checkbook simulator  
Have them sketch the layout on a piece of paper including any formulas they will be using. Have them print their spreadsheet.  
60 min
5. Make sure you go around and suggest how they might use formulas, sum a column, use text alignment, style, etc. Encourage them to be creative in the layout of the spreadsheet. Feel free to do a sample on the blackboard.

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 6

# LAB 6 COMPUTER SCIENCE 101

## INTEGRATED APPLICATION/MACINTOSH Microsoft WORKS

### Faculty Instructions

1. Check roll.
2. Show students (using the Data Show) how to create an integrated document; use the files in MS folder or create your own for a demo. Just do one combination; wordprocessing with database/wordprocessing with spreadsheet. 20 min
3. Let the students use their own database (CIS 101DB) or spreadsheet files (VACATIONS or CHECKBOOKS) and their wordprocessing file (LETTER!). They are to create a document which requires them to produce an integrated report 65 min
4. Let them print their document. 10 min
5. The document should be at least 3 to 4 pages long. Let the students create the environment for the report.

If they finish early have them begin work on the 3 page handout-they can start in lab if they have time or can take it home. Tell them that this is not a test and it will not be graded but they should use it as a study guide. It is to be returned next week in lab (you will give them the answers).

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 7

# LAB 7 COMPUTER SCIENCE 101

## MACINTOSH-APPLICATION SOFTWARE

### Faculty Instructions

1. Check roll.
2. Select some application that you have not used in lab (CRICKET GRAPH, SUPERPAINT, etc.) and do a short demonstration of the software. Point out to the students some of the similarities in menu items from one Macintosh package to another.  
15 min
3. Now let the students select a package they would like to use (other than one that has been used in class).
4. Let each student now use the package.  
90 min
5. Make sure you go around and suggest how they might use the package; answer specific questions about the software, help them print and encourage them to use the on line and reference documentation in the lab.

Lab time 1.75 Hr  
Break .25

Dr. Frasca  
Professor, Computer Science

Week 8

# LAB 8 COMPUTER SCIENCE 101

## GRAPHICS

### Faculty Instructions

1. Check roll.
2. Show students (using the Data Show) how to access the FULL PAINT and CLIP ART; open Full Paint first and do a demo with it showing several features (spray can, draw tool, the marque, etc); leave FullPaint open and then go and open Clip Art. Bring in a piece of art and demonstrate how you can edit it. Show them how they can cut/copy from FullPaint into a word processing document (ie WORKS). 30 min
3. Now let the students do the exercise. Go around and help/show them some of the various options when in Full Paint and Clip Art. Encourage them to go to rack and preview the printed pages of ClipArt. 65 min
4. Let them print their documents. 10 min

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 9

## LAB 9 COMPUTER SCIENCE 101

### INTRODUCTION TO HYPERCARD

#### Faculty Instructions

1. Check roll.
2. Using the data show, introduces the students to Hypercard; show them how to get to and start the INTRO stack; show them some applications (from the HOME card) -- you may want to do a cut and paste into WORKS from the HYPERCARD ClipArt.  
15 min
3. Have the students go into Hypercard and complete the INTRO stack.  
40 min
4. When the students are finished take them to Media Center of the Library and do a demo of the laserdisc "National Gallery of Art" using the Mac IIcx with the National Gallery Hypercard stack. (If you have not done this before you must see Joe Frasca to use the laserdisc and the interfacing with the Hypercard stacks. Simply do a demo and let the students try it.)  
45 min

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 10

# LAB 10 COMPUTER SCIENCE 101

## INTRODUCTION TO THE APPLE II® BASIC OPERATIONS

### Faculty Instructions

Pick up lab key from the Computer Center (and code); the far right drawer contains "APPLE PRESENTS APPLE" TUTORIALS, SYSTEM MASTERS, KNOW YOUR APPLE TUTORIALS, and some blank disks. The far left hand drawer is for student access to disks. It contains various amounts of Systems masters, blank disk, a 3 inch tutorial disk for the Apple GS, and some Apple Presents Apple Tutorials.

1. Check roll.
2. Get the security screwdriver from extended Ed (Lynda) and open the machines (3) at the start of each row and show small groups the CPU, location of RAM, ROM chips, power supply, any interface boards (the disk controller board is good its in port 6 -- when they boot in the exercise they will do a PR#6 -- they will then relate to this), and motherboard. 15 min
3. Using the large monitor in STEV 1040 with the instructor's Apple and demonstrate how to turn on the Apple and monitor, how to do a cold and warm boot (explain about the Corvus network in the lab and the use of CONTROL RESET). As a demo for them boot the tutorial disk they will use, i.e., "APPLE PRESENTS APPLE". Show them how to exit this program with the Control Reset. Remind them to do a RETURN after they enter a command. You can demonstrate a cold boot by using 1) The Apple Presents Apple disk and placing it in the GS drive and then turn on the machine or 2) use the GS Tour disk and place it in the GS drive and turn on the machine -- it takes about 4-5 min for this disk to boot - it is a large demo program. 15 min
4. Now let them do the tutorial. 45 min  
(The tutorial works on the GS if you want to use them.)
5. When they are finished with the tutorial take them through the process of how to format a disk the "short" and "long" way. During the demo as you use DOS and BASIC commands (e.g., PR#6, INIT HELLO, NEW, LIST, RUN, LOAD etc.) explain what these commands do as each is demonstrated. (They can use their lab manuals for reference -- see student lab printout.) 15 min
6. Let them format their disk the short and long way. 30 min  
(They should practice this process until comfortable.)

Lab time 1.75 Hr  
Break .25 Hr

Dr. Frasca  
Professor, Computer Science

Week 11

# LAB 11 COMPUTER SCIENCE 101

## APPLE IIe DOS

### Faculty Instructions

1. Check roll.
2. Using the large monitor in STEV 1040 with the instructor's Apple load and demonstrate the contents of the Apple IIe SYSTEM MASTER disk. Explain the following differences in A, I, B, T files, the \* which shows; and explain the value after the file type.  
15 min
3. Review for them how to format a disk the "short" and "long" way. Type a short BASIC program and use it to format the disk. After they have done this the short and long way have them use/enter the BASIC program from their lab manual on page 37 and reformat the disk. This program will do a CATALOG on the disk when it is booted with a PR#6. Have them try this. This will act as a good review for them based on last week's material.  
20 min
4. After they have finished the formatting demonstrate the use of DOS and BASIC commands on page 38 of the lab manual: CATALOG, LOAD, RUN, SAVE, BLOAD, BRUN, RENAME, DELETE, LOCK, UNLOCK. During this demo stop and ask them "where is the program -- in RAM, on the disk", etc.  
15 min
5. Using their reformatted disk have them do the exercise on page 35 and 36 of the lab manual. This will take them through the commands. Have them fill in the answers on page 36 as to what each command does.  
20 min
6. Demonstrate how to use the file utility programs COPYA and FID. Point how FID is a B type file and to run it you need to do a BRUN. Actually copy an entire disk with COPYA and pick out a selected B or T file from the SYSTEM MASTER disk and copy to another disk. After the demo let the students use BOTH programs.  
30 min

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 12

# LAB 12 COMPUTER SCIENCE 101

## APPLE II<sup>e</sup> LANGUAGES

### Faculty Instructions

1. Check roll.
2. Review the use of the COPYA and FID programs. 10 min
3. Demonstrate how to type in a short program in BASIC (do any one -- a sum of three number and the mean is fine). Save it, run it, list it, rename it. Demo how to print the listing of the program to the printer (only three in the room--not networked). Load or run the program; do a PR#1 to put the printer on-line; type LIST. To take off-line enter a PR#0. 10 min
4. At this point have the students enter, edit, run, save a variety of programs in BASIC and LOGO. Handout the program to input 3 numbers and output the sum, product, and product squared.

After they finish this talk a bit about color and graphics and give out the 3rd handout (sailboat and the car). Let them enter these two programs. They also use any of the programs in the lab manual on page 83, 84, (color changes on page 85), 86, 87, (88 summary of commands), 89. 1.5 hr

5. If there is any time left let them try some LOGO programs. The master LOGO disk will need to be loaded on each machine (the disk can then be taken out); do a demo of LOGO and write a short procedure to do a box -- indicate how this is a more structured approach to programming then in Apple BASIC.

There are a series of programs to enter on pages 91-96 in the lab manual.

To load the language -- locked drawer on right/blue box/disk marked LOGO MASTER:

Boot the disk with PR#6  
At flashing cursor press RETURN  
Will see in about 40 secs:  
WELCOME TO LOGO  
?

You are now ready to enter LOGO commands (there is a LOGO programming book in the drawer and a general command reference list in the lab manual--p91 & 95).

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 13

# LAB 13 COMPUTER SCIENCE 101

## APPLE IIe APPLICATIONS

### Faculty Instructions

1. Check roll. You may want to do 2 or 3. Both cannot be completed in 2 hours.
2. If some of the students want to use LOGO, let them. The master LOGO disk will need to be loaded on each machine (the disk can then be taken out); Do a demo of LOGO and write a short procedure to do a box--indicate how this is a more structured approach to programming then in Apple BASIC.

To load the language---locked drawer on  
right/blue box/disk marked LOGO MASTER.

Boot the disk with PR#6 At flashing cursor press  
RETURN. Will see in about 40 secs:

WELCOME TO LOGO

?

You are now ready to enter LOGO commands (there is a LOGO  
programming book in the drawer and a general command reference  
list in the lab manual--p 91 & 95)

3. Have the students go to the RESERVE ROOM of the library and pick out a software application package to take back to the APPLE lab and use (or they can do the LOGO).
4. During the exercise have the students look at the user guide that comes with the software. ENCOURAGE THEM TO USE IT. Have them answer the questions in the exercise and turn in. NUMBER 2 ABOVE IS OPTIONAL!
5. Have them answer the question about the software.

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

Week 14

# LAB 14 COMPUTER SCIENCE 101

## PURCHASING A COMPUTER

### Faculty Instructions

1. Check roll
2. This final lab will be used to explore, in a discussion format, the topic "Now What do I do? - How to purchase a Computer"
3. As lab instructor you will need to get the class going. With this lab you can assume the role of a facilitator. Give them a set of cases to think about:
  1. You are a teacher and want a computer for you classroom.
  2. You have a "small" home business with limited dollars to spend. What is "best"?
  3. I want a "home computer" or one "for the dorm". My parents are going to buy it -- what should I tell them -- money is no object.
  4. I have limited funds -- should I buy a "used" computer.
  5. Create two to three unethical situations in using the computer (i.e., copying software and giving it to a friend, or you are accidentally sent a confidential mail message belonging to someone else -- what do you do?). Give the students some time to evaluate each situation and let them discuss what should/should not be done. Feel free to play the "Devil's advocate".

Feel free to create your own situations for discussion.

1st Hour

---

|          |         |
|----------|---------|
| Lab time | 1.75 Hr |
| Break    | .25 Hr  |

Dr. Frasca  
Professor, Computer Science

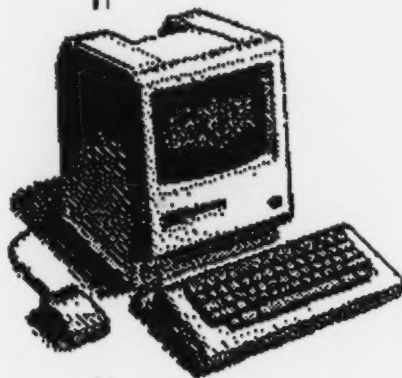
Week 15

# Introduction to Computing

---

LAB MANUAL

Student Guide



Sonoma State University

Instructional Development and Technology Program  
Lottery 1989-90

---

Dr. J.W. Frasca, Project Director  
Professor, Computer Science

Donna M. Tapella, Graphic Artist  
CIS 175 Computer Graphics

CSU Institute for Teaching and Learning  
and  
ERIC Clearinghouse on Higher Education

The California State University Institute for Teaching and Learning (CSU/ITL) facilitates a 20-campus network of teaching and learning programs in the CSU system. ERIC/HE has entered into an agreement with CSU/ITL to process documents produced by the system and create a mini-collection within the ERIC database.

Major objectives of this initiative are as follows:

- increase awareness of the work of the CSU Institute for Teaching and Learning;
- increase access to the work of CSU/ITL affiliates;
- begin to build a subset of information on teaching and learning that supports *The National Teaching and Learning Forum (NTLF)*, ERIC/HE's newsletter;
- encourage use of the ERIC system by CSU/ITL member affiliates and the *NTLF* readership; and
- test a model for collaboration between ERIC/HE and a major higher education system.

All CSU/ITL ERIC RIE citations are tagged with the following identifiers appearing in the IDEN:Field:

- College Teaching and Learning Collection; and
- California State University for Teaching and Learning.

All CSU/ITL citations carry the following statement in the Note Field:

This document is part of a collection produced under the auspices of the California State University Institute for Teaching and Learning. The CSU/ITL, created in 1988, facilitates a 20-campus systemwide network of faculty affiliates in response to the demand for improved teaching and learning in the college classroom.

## **TABLE OF CONTENTS**

|               |                                                           |
|---------------|-----------------------------------------------------------|
| <b>LAB 0</b>  | <b>Introduction to Electronic Mail</b>                    |
| <b>Lab 1</b>  | <b>Introduction to the Macintosh Computer SE/II</b>       |
| <b>Lab 2</b>  | <b>Macintosh Orientation SE/II</b>                        |
| <b>Lab 3</b>  | <b>Macintosh Orientation SE/II - WORKS/wordprocessing</b> |
| <b>Lab 4</b>  | <b>Applications-WORKS/database</b>                        |
| <b>Lab 5</b>  | <b>Applications-WORKS/spreadsheet</b>                     |
| <b>Lab 6</b>  | <b>Integrated WORKS</b>                                   |
| <b>Lab 7</b>  | <b>Macintosh Applications-General</b>                     |
| <b>Lab 8</b>  | <b>Macintosh Applications-Graphics</b>                    |
| <b>Lab 9</b>  | <b>Macintosh Applications-Hypercard &amp; Videodisc</b>   |
| <b>Lab 10</b> | <b>Introduction to the Apple IIe/Apple GS</b>             |
| <b>Lab 11</b> | <b>Introduction to Apple DOS/system utilities</b>         |
| <b>Lab 12</b> | <b>Apple IIe Languages-BASIC &amp; LOGO</b>               |
| <b>Lab 13</b> | <b>Apple IIe/GS Software/Documentation Evaluation</b>     |
| <b>Lab 14</b> | <b>How to Purchase a Computer; Computer Ethics</b>        |

# LAB 0 COMPUTER SCIENCE 101

## INTRODUCTION TO ELECTRONIC MAIL

### Student Objectives

1. Complete a tour of University Computer facilities.
2. Identify the four basic types of computers.
3. Identify the four basic components of any computer.
4. Be able to log on and use the VAX computer for electronic mail.

Dr. Frasca  
Professor, Computer Science

Week 1

## Getting Started on the VAX Computer

### READ

#### Some conventions used in this guide

Several different type fonts are used in *The Guide* to help make the examples easier to understand. In the examples :

- All text which is generated by the computer is in Courier font.

```
Welcome to VAX/VMS version V5.2 on node VAX
Last interactive login on Monday, 16-OCT-1989 13:19
```

- Text which is entered by the user is underlined.

```
Username: yourname <RET>
```

- Angle brackets indicate a special character key. The name of the key is contained within the brackets, e.g. <DELETE> or <ENTER>. The text enclosed in < > is the name of the key not a word that has to be spelled out. Some of the more common keys and their representations are:

|         |                |
|---------|----------------|
| <RET>   | the return key |
| <ENTER> | the enter key  |
| <SPACE> | the space bar  |
| <TAB>   | the tab key    |

- The control key is used to enter special control codes. It works like the shift key on a typewriter. That is you hold down the <CTRL> key while you press another key, <CTRL><Z>, for example. Hereafter <CTRL><Z> and other control sequences will be represented as: <CTRL/Z>. There is a complete list of control characters in Appendix C.
- Most of the examples begin with a \$. The \$ is the system prompt, a character displayed by the computer to inform you that it is waiting for you, the user, to do something. You do not have to type a \$ as a part of a command to the computer.

```
$ PRINT myfile.imp <RET>
$
```

#### When you see:

|          |                   |
|----------|-------------------|
| SCAN -   | Do a "quick" read |
| READ -   | Read it           |
| ACTION - | Do the activity   |

### LET'S GET STARTED

## Getting Started

### READ (briefly)

#### SSU's VAX

The VAX is one of several timesharing hosts on Sonoma State's local area network (LAN). The VAX is available for use by the campus community. The only restrictions that are placed on users are:

- Access time is available on a first-come first-served basis. As long as others are not waiting to use the equipment there is no time limit placed on the length of terminal sessions. In the case where all of the computers in a lab are in use and there are people waiting for a turn to use a computer, sessions are limited to two hour blocks.
- Disk space is limited on a quota basis.
- Commercial use of the facilities is prohibited.

#### Opening a VAX Account

In order to use the VAX you must have a VAX account. Faculty and staff should come to the Computer Center to apply for a VAX account. Account application forms are available in the Computer Center lobby. Fill one out and give it to the Computer Center secretary, in Salazar Library 1502. You will be asked to produce a valid SSU Library ID and an account will be set up for you within a day or two. You will be notified of your username and password through the campus mail.

If you are a student you will receive a VAX account as part of the registration process. If you did not pick up your account information during registration, you can obtain it from the Computer Center secretary in Salazar Library room 1502 upon production of a valid SSU Library ID.

#### Accessing the VAX

There are two steps to accessing the VAX. First you must establish a connection between your workstation ( terminal or microcomputer ) and the VAX. Then you must log in to the VAX. Although logging in to the VAX is always the same, the way in which you make a connection to the VAX depends on the type of workstation which you are using. The following sections contain specific instructions for connecting to the VAX with the most commonly used workstations.

#### Making the VAX Connection

There are two distinct paths of access to the VAX ( or any other SSU computing resource.) The first is via the campus Local Area Network (LAN) the other is through the Micom data switch. In general, if you are working at a terminal you will be using the Micom to access the VAX and if you are working at a microcomputer ( IBM or Macintosh ) your access will be via the LAN. The following sections describe each of these options in detail, depending on the type of terminal or microcomputer that you are using.

#### READ - This is It

##### If you are using a terminal

- 1) Turn on the terminal if it isn't already on. The location of the On/Off switch varies from one terminal to another.

- 2) Press the SPACE BAR and you should see the following Micom prompt

```
For the names of computing resources, type HELP
Terminal Line NO.  xx/yyy
WHAT SYSTEM
```

- 3) Type VAX (in either upper or lower case ) and press <RET>. Within a second or so the computer will respond with the word GO and beep. Wait another second and then press <RET> twice again and you will see the VAX logon message

```
Welcome to the Sonoma State University VAX
```

```
Username:
```

## READ

### Logging In to the VAX

The VAX is a time-sharing system and can be used by many people at the same time. Because of the need to keep track of those who are using the system at any given time, you must sign in with your username and password whenever you wish to use the VAX. This process is called "logging in".

When you connect to the VAX you will see a welcome message and be asked to enter your username

```
Welcome to the Sonoma State University VAX
```

```
Username:
```

Type your username exactly as it was assigned to you, then press <RET> .  
You will then be prompted for your password

```
Password:
```

Type your Password and press <RET>. To maintain security, the Password will not be displayed as you type it in.  
The validity of your Username and Password will be checked. If valid, the system will respond with another welcome message.  
If there are any news messages, they will be displayed immediately after you enter your Password.  
If you mistype either the username or the password, you will receive the message:

```
User authorization failure
```

Press <RET> to get the Username: prompt and try again.  
After three unsuccessful attempts to log in, the VAX will disconnect you and you will have to start the entire access sequence over.  
If you are unable to log in to the VAX after several attempts, contact the Computer Center Helpline at (x2906) for assistance.

**ACTION** Please answer: What two elements are needed to log into the VAX (WRITE IN YOUR ANSWER)

\_\_\_\_\_ and \_\_\_\_\_

**NOTE:** Find your VAX account name and password and let's try it

## READ AND ACTION

### Logging in for the first time

The first time you log in with a password that has been assigned to you by the Computer Center you will also receive the following message:

Welcome to VAX/VMS version V5.2 on node VAX

Your password has expired; you must set a new password to log in

You will be prompted for your old Password (the one assigned to you by the Computer Center.) Type it (it will not appear on the screen) and press <RET>. Next you will be prompted for a new Password. Enter one (any word at least six letters long) and press<RET>. Finally, you will be prompted for verification of the new Password to insure that you have not inadvertently changed it to something unknown to you by typing the intended word incorrectly. Enter your new Password again. If you complete this process correctly, the \$ prompt will appear. The next time you log in, you must use the new Password to gain access to your account. In the example below the old Password is ELEPHANT and the new Password is GRIBBLES.

|               |                       |                 |
|---------------|-----------------------|-----------------|
| Old Password: | <u>ELEPHANT</u> <RET> | (not displayed) |
| New Password: | <u>GRIBBLES</u> <RET> | (not displayed) |
| Verification: | <u>GRIBBLES</u> <RET> | (not displayed) |

## READ AND ACTION

### Logging Out

The procedure for logging out is the same whether you are using a terminal or a microcomputer. You must get back to the system's \$ prompt, then log out by typing:

\$ LOGOUT <RET>

Typing the LOGOUT (or LO) command ends your session correctly and ensures that no subsequent user of the terminal will have access to your account and files. Turning off the terminal does not log you out. A successful logout will be confirmed by a message from the VAX:

YOURNAME logged out at 16-OCT-1989 10:08:22.24

You should be careful to log out at all terminals at which you log in.

**ACTION: PLEASE LOG OUT**

**WRITE OUT THE VAX COMMAND THAT WILL LET YOU  
DISCONNECT FROM THE COMPUTER:**

**GIVE THE ABBREVIATION FOR THIS COMMAND** \_\_\_\_\_

**READ**

### Between Logging In and Logging Out

There are many things that you can do on the VAX system once you have logged in. Performing statistical analyses, writing computer programs, word processing and communicating with others who have computer accounts are a few examples.

## Resetting Your Password

Your Password together with your Username identify you to the VAX system. Although your Username is a unique name that identifies you to the system and entitles you to use the facilities, it is public, thus it cannot control access to your account and files. For the purposes of account security, a Password is also used. When selecting a password take the following precautions:

- Passwords must be at least 6 characters long, but remember that the display screen will not display your password as you type it, making the task of successfully entering a very long password difficult.
- Do not write your password down where someone might see it.
- Select a password that is easy to remember and type, but is unlikely to be guessed by others. First names, birthdays, social security numbers, names of lovers, etc. are poor choices.
- Change your password frequently or anytime you think someone might know it.
- Some programs, such as computer-aided instruction packages, ask you to provide a "code" word. Do not use your account password --- choose a different word.

To reset your password at any time, ensure that you have a \$ prompt, then type:

```
$ SET PASSWORD <RET>
```

**ACTION:** Log in and change your password.

**NOTE:** TAKE YOUR PASSWORD WHICH WAS GIVEN TO YOU AND CHANGE IT TO SOMETHING YOU CAN REMEMBER---DON'T MAKE IT TOO EASY (don't use your first name)

You will be prompted for your old Password. Type it (it will not appear on the screen) and press <RET>. Next you will be prompted for a new Password. Enter one and press <RET>. Finally, you will be prompted for verification of the new Password to insure that you have not inadvertently changed it to something unknown to you by typing the intended word incorrectly. Enter your new Password again. If you complete this process correctly, the \$ prompt will appear. The next time you log in, you must use the new Password to gain access to your account. In the example below the old Password is ELEPHANT and the new Password is GRIBBLES.

```
$ SET PASSWORD <RET>
_Old Password:  ELEPHANT <RET>          (not displayed)
_New Password:  GRIBBLES <RET>          (not displayed)
_Verification:  GRIBBLES <RET>          (not displayed)
```

If you make a typographical error in any of the entries, the Password will not be changed, you will receive an error message, and you must start over again by entering the SET PASSWORD command.

**ACTION:** NOW LOG OUT AGAIN AND LOG BACK IN WITH YOUR NEW PASSWORD AND GO ON TO THE NEXT SECTION ON HOW TO USE ELECTRONIC MAIL.

**NOTE:** YOU MAY CHANGE YOUR PASSWORD AS OFTEN AS YOU LIKE.

## VAX Communications Facilities

### SCAN: VAX Utilities for Communication

One of the most significant applications of the VAX system is to facilitate communications, both within the campus, and between SSU and other universities and colleges. As well as providing convenient communications, use of the VAX has considerable potential for cost savings, since there is no charge for any of the communications links which are used.

There are several ways to use the VAX to communicate with other users.

**READ: MAIL** — this program allows messages to be sent to an individual person or group of people. As well as sending mail to other VAX users, you can send mail to staff and faculty who use Quickmail on Macs or IBM personal computers. Mail is primarily a private means of communication, usually between two people, and does not require that both individuals use the computer system at the same time. You can also use mail to communicate with computer users elsewhere, through the networks to which SSU is connected. Most university computer systems provide mail access.

**SCAN: PHONE** — this program allows any two users of the VAX to converse directly, using the terminal as a "telephone." Unlike mail, the phone program requires that both people be using the computer at the same time in order to function. Like mail, it is also primarily a private communications medium. You can use phone to contact users at other campuses, provided that they use the same computer system as ours, and provided that the network permits this type of activity. At present there are only a few campuses that support phone conversations.

**NOTES:** This program implements computer conferencing on the VAX. You can leave messages on the system, which are visible to other users. Likewise, you can respond to public messages which have been left by other users. Like mail, notes does not require you to be present at the same time as the person with whom you are communicating. Unlike phone and mail, notes communications are typically public — anything you write is visible to other users. The availability of notes off campus is similar to that of phone — but we anticipate that the number of campuses which use notes will grow in the near future.

### READ: VAXmail

The VAX system has a mail facility with which you can send messages or files to other users or groups of users. To enter the MAIL utility use the command:

`$ MAIL <RET>`

The MAIL> prompt indicates that you are at the command level of MAIL. If you have mail that you have not yet read, you will receive a message when you first log in to inform you that you have new mail. You will see this message again when you enter the MAIL facility. If new mail arrives while you are logged in a message heralding its arrival will appear on your screen.

**ACTION :** GO AHEAD AND ENTER INTO VAX MAIL

### READ: Reading Mail

To read new mail, first enter the MAIL utility, then enter the command:

`MAIL> READ <RET>`

or, simply press the <RET> key:

The mail message will appear on your screen with a header telling you who sent it, to whom it was sent, and the subject of the message. If the message fills up more than one screen, you will be prompted to press <RET> for more.

To read old mail, enter the MAIL utility and look at the list of messages in your mail directory. To get a listing of what's in the MAIL folder type:

MAIL> DIR <RET>

### **ACTION: TRY THIS**

To read the second message in the listing, type:

MAIL> READ 2 <RET>

If someone sends you a mail message while you are in MAIL, you a message will flash on your screen. To read this mail without first leaving the mail utility, type:

MAIL> READ/NEW <RET>

### **READ: Sending Mail**

There are several ways to to send someone mail. If you have received mail from someone, you might want to reply. At the first MAIL> prompt after reading the message you would type:

MAIL> REPLY <RET>

This automatically puts your username at the top of the message. If the message to which you are replying already has a subject, your message will have the subject RE: the subject. Otherwise you will be prompted for a subject; enter one and press <RET> or, if you don't want a subject, just press <RET>. Now you can enter your message. If you want to send a message that is not a reply,

MAIL> SEND <RET>

You will be prompted for the username (see below if you are not sure what name to use):

To: USERNAME <RET>

You will be prompted for a subject. Then you will be able to enter your message. To send it on its way, type <CTRL/Z>. If you change your mind or make a mistake, type <CTRL/C> and your message won't be sent. Wait until the MAIL> prompt reappears before you do anything else.

**ACTION: FIND A PERSON IN YOU LAB YOU WOULD LIKE TO SEND A MESSAGE - SEND THAT PERSON A MESSAGE - TRY FINDING AN ELECTRONIC PEN PAL.**

### **FOR EXAMPLE:**

MAIL> SEND CLAY

when prompted, enter a subject

when prompted, enter in the message and when finished enter in the <CTRL/Z>

**TRY SENDING YOURSELF A MESSAGE -----YES --IT CAN BE DONE  
SEND YOURSELF A MESSAGE (OUTLINE WHAT YOU NEED TO DO  
TOMORROW). You may have to wait a few minutes before you see it in your  
directory. Try using the DIR command.**

## READ & ACTION

### Deleting Mail

You can delete a message immediately after reading it (see above for reading new or old mail) or by the number which it is assigned in the mail directory. After you've read the message, enter the command:

```
MAIL> DEL <RET>
```

If the message you want to delete is number 2 in the mail directory, enter the command:

```
MAIL> DEL 2 <RET>
```

**ACTION: DELETE A MAIL MESSAGE---ANYONE, JUST TRY IT**

### Exiting from Mail

When you've finished using MAIL, type:

```
MAIL> EXIT <RET>
```

to return to the \$ prompt.

### Finding out about other users — WHO and FINGER

On the SSU VAX system, our convention is to use people's last name as their username. However, in many cases there are a number of people with the same last name, so a utility called WHO has been provided to help you find out which username you need to use in order to reach a particular individual. At the VMS \$ prompt, simply type WHO, followed by the name of the person you wish to know about (their first name, last name, or combination will do.) For instance, if you type:

```
$ WHO ARMSTRONG
```

you will get a listing something like this:

| <u>Full name</u> | <u>Username</u> | <u>Category</u> | <u>Group</u> |
|------------------|-----------------|-----------------|--------------|
| John Armstrong   | ARMSTROJ        | Student         | Std          |
| Kate Armstrong   | ARMSTROK        | Student         | Std          |
| Xavier Armstrong | ARMSTROX        | Student         | Std          |

If you want to check if a particular user has actually logged into the VAX (many students do not use their VAX accounts), you can use the FINGER command to do so, like this:

```
$ FINGER ARMSTROJ
```

which will result in a listing like this if they have never logged in (notice the 19th century date!):

```
[ARMSTROJ] JOHN ARMSTRONG last logged in 17-NOV-1858 00:00:00.00.
```

```
JOHN ARMSTRONG has no new mail.  
Address mail to 'JOHN.ARMSTRONG@VAX.SONOMA.EDU'  
No Plan:
```

something like this if they have been using the system:

```
[ARMSTROJ] JOHN ARMSTRONG last logged in 12-JAN-1990 17:20:34.63.
```

```
JOHN ARMSTRONG has new mail.
```

```
Address mail to 'JOHN.ARMSTRONG@VAX.SONOMA.EDU'
```

```
No Plan:
```

or something like this if they are actually using the system at the time you give the FINGER command:

| User     | Name           | Term   | State | Image | Location            |
|----------|----------------|--------|-------|-------|---------------------|
| ARMSTROJ | John Armstrong | TWA264 | CUR   | EDIT  | Unknown Server Down |

```
JOHN ARMSTRONG has new mail.
```

```
Address mail to 'JOHN.ARMSTRONG@VAX.SONOMA.EDU'
```

```
No Plan:
```

Notice that you can tell how recently the person with whom you wish to communicate has used the VAX, and also whether they have any mail waiting for them. In general it is not worth sending mail to someone unless they use the computer reasonably frequently, and check their mail when they do so.

FINGER is a means by which anyone on campus, or elsewhere on the computer network to which we are connected, can find out about you. You can help them by providing some useful information in a file called PLAN. in your main directory. You can make this file using the EDIT editor (as described elsewhere in this Guide.) Notice the period at the end of the file name, you need it for the FINGER program to be able to lookup the file. Anything you put in the file will be visible to anyone else who "fingers" you. Since this presents an external impression of the campus, please do not enter offensive material into your PLAN. file.

**ACTION:** EXIT MAIL AND RE ENTER; TRY THE FINGER COMMAND - "TRY TO  
**READ** FINGER SOMEONE"

### Reclaiming Disk Space from Mail

The VAX mail system tends to produce mail files that grow continuously, thus you can find yourself with much of your allotted disk space taken up by the mail file, even if you carefully delete your unneeded mail. There is a command that can be used to effect a remedy. To do this proceed as follows:

```
$ MAIL <RET>
MAIL> COMPRESS <RET>
MAIL> EXIT <RET>
$ DELETE [maillmail.old:*
```

**READ:** Distribution lists

It is frequently useful to be able to send mail to a number of users at once. You can do this by making up a distribution list containing the usernames of the intended recipients, one per line. The list is simply a text file, which you can make using the editor. The standard file extension for this kind of file is .DIS, thus you might make a file in your disk space called FRIENDS.DIS, and put into it the following contents:

```
RESMER
KARAS
```

SHERWOOD  
BOWES

Once you made the file, you can send a message to this group of users at any time, by using the name @FRIENDS instead of a username within Mail, e.g:

MAIL> SEND <RET>  
To: @FRIENDS <RET>

This is a way to send a selected group a common message.

YOU MAY WANT TO USE THIS TO FORM A STUDY GROUP FOR THE CLASS.

**READ &:** AND LET'S TRY TO PRINT A MESSAGE. FIRST GO  
**ACTION** AND DO A DIR COMMAND. FIND A MESSAGE YOU WANT TO READ.  
NOW:

**READ: HOW TO PRINT A MESSAGE**

To print a mail message on the VAX first select the message you want to read:

MAIL> Read 1

The message will now appear on the screen. Now just use the command:

MAIL> Print

and a printed copy will be made. The hardcopy will be printed (it will take some a while---the copy will be place in a bin in Rm 1506. You mail message will have your name on it and it will be sorted into the proper bin. You can just take it out.

**ACTION: FIND A MESSAGE YOU WANT TO PRINT (IT COULD BE THE ONE YOU SENT TO YOURSELF) AND PRINT A COPY. PICKUP THE COPY SOMETIME AFTER LAB.**

**READ: HOW TO GET HELP**

The VAX and its "E" Mail has "on-line" user help. To get help when in mail or when you have the system prompt \$ just enter the followin and follow the instructions.

\$  
\$ Help

you will now get of list of command on which you can get help. When in mail just enter the following:

Mail>  
Mail> Help

you will now get a list of mail commands and prompt which will ask you for further information.

**ACTION:** TRY USING THE HELP COMMAND AT THE SYSTEM LEVEL  
(when you have the \$) AND ALSO TRY USING HELP WHEN  
IN MAIL. JUST TRY ANY OF THE COMMANDS.

**READ &** When you are finished just exit Mail and log off the  
**ACTION:** VAX.

## STUDY ACTIVITY

Answer the following and turn into your lab instructor.

1. How would classify the VAX as a computer: micro, mini, mainframe, or a supercomputer? \_\_\_\_\_
2. What are the four basic hardware components of the VAX /  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_
3. What two components are need to log on the VAX?  
\_\_\_\_\_ and a \_\_\_\_\_
4. What is "E" mail  
\_\_\_\_\_
5. What command would you enter to:  
enter "E" mail \_\_\_\_\_  
find out what messages you might have \_\_\_\_\_  
look at a piece of mail you have \_\_\_\_\_  
make a hardcopy on paper of a particular message \_\_\_\_\_  
exit mail \_\_\_\_\_
6. What VAX command would you enter to change your password?  
\_\_\_\_\_
7. What VAX command would you enter to exit the VAX  
\_\_\_\_\_
8. What do you think the \$ means when you are on the VAX? \_\_\_\_\_  
\_\_\_\_\_

# **LAB 1 COMPUTER SCIENCE 101**

## **INTRODUCTION TO MACINTOSH (MAC SE AND/OR MAC II)**

### **Student Objectives:**

1. Use VAX E Mail from a Macintosh.
2. Be able to execute basic Mac commands.
3. Use and complete the Mac "Guided Tour" tutorial.
4. Be able to log on and off the Macintosh.

### **Macintosh Lab Activity**

#### **LISTEN**

Your lab instructor will give you an overview of basic Mac functions like how to turn the computer on and off, use the mouse, move the cursor on the screen, how to open and click on an icon, and lab guidelines. Take notes during this demonstration. Concepts and skills will be reinforced when you use a software tutorial during the lab.

#### **NOTES:**

#### **READ (EVERYONE)**

This assignment is designed to introduce you to the features of the Macintosh; some of you will be using Mac SE's and some will be using Mac II's. There are two sections below, one for each Mac computer. The Mac SE lab is located in RCarson 1; the Mac II lab is in Darwin 19a. Each of you should have a lab manual; please use it with this activity by referring to the Mac section at the front.

## **READ AND ACTION (MAC II USERS)**

Turn on your Mac and observe the oval icon in the upper right of the screen. It will say Hard Disk under it; move your mouse so the cursor is on that icon -- now double click.

A window will open and you will see a series of icons that look like file folders (each will have a name). Find the folder marked NCSA TELNET and open it (double click). You will now see two icons, double click on the one entitled VAX TERMINAL. This will bring you to the VAX prompt to log in with your account name and password.

Use E mail like you did last week. Send someone a message. Last week you used a terminal to access the VAX, now you are using a microcomputer as a terminal. Now log off the VAX and close the window.

You will now see a window with all the folders in it again. Look and find the folder marked GUIDED TOUR. Open that folder and you will see an icon shaped like a movie projector, double click on it and follow the instructions. It will take you about 45-50 min. to complete the tour. When finished, complete the last page and give it to your lab instructor. If you have any time left do the tour or a part of it a second time -- it will help you get comfortable with using the Mac.

## **READ AND ACTION (MAC SE USERS)**

Turn your machine on and you will see on your screen a number (about six or seven) icons on the right side your screen. You will notice that each icon has a different name. Look and find the icon that has the name VAX TERMINAL and open it (double click on the icon).

You will now be connected to the VAX. Login and use Mail. Send someone a message. After you do this log off the VAX. Last week you used the terminal to connect to the VAX to use mail -- now you are using the microcomputer as a terminal to connect to it. When you are finished close the window on your desktop. You should now see all the icons (on the right side of the screen) that you first saw when you turned the computer on.

## **READ AND ACTION (MAC SE USERS)**

You are now going to use a tutorial that will take you through the basic usage of the Mac SE. Go up and see your lab instructor.

Use the disk marked THE GUIDED TOUR (THEY ARE IN THE FRONT OF THE LAB ON THE COUNTER -- JUST TAKE ONE -- WHEN FINISHED, RETURN THE DISK).

Your instructor will give you the disk today but there are always a few kept in front of the lab for your use at any time.

Put the disk into the disk drive and go up to the SPECIAL MENU and pull down to RESTART -- THE DISK WILL LOAD INTO THE MACHINE.

Now just go through the instruction and enjoy the tour. As you go through the tour don't be afraid to ask your partner questions and don't forget to trade off so each of you has a chance to do some keyboarding. (This is if you are sharing a machine.)

When you finish the tour go to the last sheet and answer the questions. Turn the sheet into your lab instructor.

If you have any time left try the tour try it again, it will make you feel more comfortable in using the machine.

## **ACTION (EVERYONE)**

**NOTE:** You may want to refer to the Macintosh User Guide in the lab rack.

# INTRODUCTION TO THE MACINTOSH

1. A Macintosh computer can act as a terminal. T/F \_\_\_\_\_
2. To select an icon you: \_\_\_\_\_
3. What is the difference between VIEW by ICON vs by NAME? \_\_\_\_\_  
\_\_\_\_\_
4. Moving an icon around on the desktop is called \_\_\_\_\_.
5. What does the CLOSE command do when used from the FILE menu?  
\_\_\_\_\_
6. What does "double clicking" on an icon cause? \_\_\_\_\_
7. Black lines on a title bar indicate that a window is \_\_\_\_\_.
8. Two ways to OPEN an icon are \_\_\_\_\_ and  
\_\_\_\_\_.
9. Where does "cut" text go when selected from a sentence? \_\_\_\_\_  
\_\_\_\_\_
10. Documents can go in folders, but folders can not go in other folders.  
T/F \_\_\_\_\_
11. A quick way to close a window is to \_\_\_\_\_.
12. To change the size of a window, you use the mouse to drag the size  
box in the lower left hand corner of the window. T/F \_\_\_\_\_
13. Where would you look to find out details about a specific program  
you are using (when it was created, version, date it went on the  
machine)?  
\_\_\_\_\_

14. Up in the title bar area of a window is information on the contents;  
three items are provided, they are, \_\_\_\_\_ and  
\_\_\_\_\_, and the  
number of K's available.

15. You may have more than one window open on your desktop.

T/F \_\_\_\_\_

Dr. Frasca, Professor  
Computer Science

Week 2

## **LAB 2 COMPUTER SCIENCE 101**

### **MACINTOSH ORIENTATION (MAC SE AND/OR MAC II)**

#### **Student Objectives:**

1. Be able to formate/initialize a disk.
2. Be able to complete a tutorial on Microsoft WORKS and a WORKS wordprocessing tutorial.
3. Be able to create a short wordprocessing document.
4. Be able to edit a simple document.
5. Be able to "save" a file on to a disk.

#### **Macintosh Lab Activity**

##### **LISTEN**

Your lab instructor will give you an overview of basic Mac functions like how to access software from the system, how to create a short wordprocessing file, how to save that file, how to recall and edit that file, and how to use the lab printer.

First, however, your lab instructor will show you how to format a disk. Keep this disk because it will be your data disk for the time you use the Macintosh this semester.

Take a notes during this demonstration. Concepts and skills will be reinforced when you use the software tutorial and practice using the computer in just a few minutes.

##### **NOTES:**

### **ACTION (EVERYONE)**

Each of you should now format/initialize your disk; when you name it, use your last name -- if you leave it in the lab and it is found, your name will appear when the disk is booted.

### **READ (EVERYONE)**

Each of you should have a lab manual. Please use it for reference with this activity, especially at the start of this exercise. Refer to the Mac section at the front (you may want to refer to the section on accessing, software, saving to disk, and printing).

### **READ AND ACTION (MAC II USERS)**

Double click on the hard disk icon and a window will open, and you will see a series of icons that look like file folders (each will have a name). Find the folder marked WORKS and OPEN IT. Look for the icon that looks like a stack of cards and is labeled "A WORKS TOUR". Double click on it and do the tutorial on WORKS; when finished, do the section on WORDPROCESSING. It will take approximately 30-40 minutes to do this.

### **READ AND ACTION (MAC SE USERS)**

Turn your machine on, and you will see on your screen a number of (about six or seven) icons along the right side your screen (your electronic desktop). You will notice that each icon has a different name. Look and find the icon that has the name MICROSOFT and open it. Find the folder marked WORKS and OPEN IT. Look for the icon that looks like a stack of cards and is labeled "A WORKS TOUR". Double click on it and do the tutorial on WORKS; when finished, do the section on WORDPROCESSING. It will take approximately 30-40 to do this.

### **ACTION (EVERYONE)**

If you run into a problem use your WORKS QUICK REFERENCE GUIDE first and, if you still need assistance, just raise you hand and your lab instructor will help you. Don't be afraid to ask for help.

After you have finished the general WORKS and wordprocessing, type a short letter addressed to me on your background (where you live, hobbies, why you are here, etc.). Try to use as many features of the program as you can (change fonts, style, try a 'cut' and 'paste', set tabs, etc.). Use the spell checker to ensure that everything is spelled correctly. Now sign (use a different font) your name. Save this document to your disk -- call it LETTER1.

### **ACTION (EVERYONE)**

If you have any time left, try the tour again, it will make you feel more comfortable using the machine.

**NOTE:** You may want to refer to the Macintosh User Guide in the rack in lab.

Dr. Frasca, Professor  
Computer science

Week 3

## **LAB 3 COMPUTER SCIENCE 101**

### **MACINTOSH ORIENTATION (MAC SE AND/OR MAC II)**

#### **Student Objectives:**

1. Be able to create a short wordprocessing document.
2. Be able to "save" a file on to a disk.
4. Be able to edit a simple document.
5. Be able to select a networked printer and print a document.
6. Reinforce basic usage skills on Macintosh.

#### **Macintosh Lab Activity**

##### **LISTEN**

Your lab instructor will give you a review of basic Mac functions like how to access software from the system, how to create a short wordprocessing file, how to save that file, how to recall and edit that file, and how to use the lab printers (Imagewriters and Laser printer).

Take notes during this demonstration. Concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

##### **NOTES:**

## **READ (EVERYONE)**

Each of you should have a lab manual. Please use it with this activity, especially at the start of this exercise for reference. Refer to the Mac section at the front (you may want to refer to the section on accessing software, saving to disk, and printing -- especially those who are using the Mac SE lab).

## **READ AND ACTION (EVERYONE)**

Follow along with your lab instructor, especially the section on how to select a lab printer. Make sure you select either the Imagewriter (A, B, or C) or the Laserprinter.

After the demonstration go to your disk and use the file LETTER1 which you created last week. Please add the following before your first paragraph:

your name  
your address  
state, zip code  
tel number

Add a paragraph to your letter which explains why you decided to attend Sonoma State University. When finished, save this to disk as LETTER2 and print a copy to one of the lab Imagewriters.

Create another document which describes your last vacation and, somewhere in the document, draw your favorite pet and tell me why it's your favorite. Save this document to your disk as PETLETTER and print it to the Laserprinter -- use the DRAW tools.

Turn both printed letters in to your lab instructor.

Dr. Frasca  
Professor, Computer Science

Week 4

# **LAB 4 COMPUTER SCIENCE 101**

## **APPLICATIONS-DATABASE/MACINTOSH (MAC SE AND/OR MAC II)**

### **Student Objectives:**

1. Be able to use a Database tutorial for MICROSOFT WORKS.
2. Be able to create a database document.
3. Be able to create and print various database reports.

### **Macintosh Lab Activity**

#### **READ/LISTEN**

Your lab instructor will give you an overview of how to access the generalized hypercard database tutorial for WORKS.

Your lab instructor will use the Data Show to demonstrate. Please listen and take some notes.

As before, concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

#### **NOTES:**

## **READ AND ACTION (EVERYONE)**

After the demonstration take your data disk and place it in the machine. At this time go up to the APPLE and select your printer (those of you in the Mac SE lab you may want to refer to your lab manual-HOW TO PRINT).

## **ACTION (MAC II USERS)**

Find the folder marked MS WORKS and Open it. You will see an icon marked A WORKS TOUR (it looks like a stack of cards) -- Open it. Click on the section marked DATABASE and do the tutorial. It will take you about 30 min to do this tutorial.

When finished, do a CONTROL Q to quit Hypercard and click on the quit button.

Now go to the section of this activity marked:

### **DATABASE TASK**

## **ACTION (SE USERS)**

Your machine should be on, if the screen is black just move the mouse a bit and you will see the desktop. Before we can use the tutorial you must do the following first.

Double click on the MICROSOFT ICON on the right side of the desktop. A window will open and you will see two folders -- one marked EXCEL and the other marked WORKS. Open the WORKS folder. You will see several icons, open the one called WORKS. Now you will see a window -- look to the right of the window and you will see a series of buttons. Click on the one marked DRIVE. As you click (using single clicks) on this button, the 'drive' rotates to different icon and even your data disk if it is in the machine. Click on the DRIVE BUTTON until it says STATION.

Open that icon; now double click on the icon marked A WORKS TOUR (it looks like a stack of cards).

Open it and go to the section marked DATABASE; complete the DATABASE TUTORIAL. When finished do a CONTROL Q to exit Hypercard and then click on the QUIT button.

It will take you about 30 min to complete this tutorial. Do it all. When finished, CLOSE ALL YOUR WINDOWS. Now go to the section of this handout marked ..... DATABASE LAB TASK.

### **Database Lab Task**

#### **ACTION (EVERYONE)**

**NOTE:** WHEN YOU DO THIS NEXT SECTION YOU MAY WANT TO REFER TO THE WORKS "QUICK REFERENCE GUIDE" WHICH HAS BEEN INSERTED INTO YOUR LAB MANUAL. PLEASE USE IT .... IT WORKS.

Now go and open MS WORKS and create an actual database document. I want each of you to create a Database with the student lab roster information. Enter all of the information -- it should include:

student name, age, sex, hobby, height, and weight.

You may "lay out" your database any way you wish, but it must include all the above information. As you enter the data make sure you save it to YOUR DISK. The first time you save it with SAVE AS -- name the file CIS 101 DB.

MAKE SURE YOU SAVE THE DATABASE FILE -- YOU WILL USE IT AGAIN.

After you have entered all the data and arranged it the way you want, I would like each of you to generate the following reports: (PS you may want to refer to the MICROSOFT QUICK GUIDE.)

1. A report with names, ages, hobbies, sex, and location.
2. A report with all students living in Santa Rosa
3. A report with female students living in Santa Rosa OVER 23

Print these reports to the Imagewriter printer.

If you finish go and generate a report of your own, but use at least two selection criterion.

When you finish make sure all windows are closed on your desktop.

# **LAB 5 COMPUTER SCIENCE 101**

## **APPLICATIONS-SPREADSHEETS/MACINTOSH (MAC SE AND/OR MAC II)**

### **Student Objectives:**

1. Be able to use a SPREADSHEET tutorial for MICROSOFT WORKS.
2. Be able to create a SPREADSHEET document.
3. Be able to create and print a SPREADSHEET report.

### **Macintosh Lab Activity:**

#### **READ/LISTEN**

Your lab instructor will give you an overview of how to access a spreadsheet tutorial with Microsoft WORKS. Your lab instructor will use the Data Show to demonstrate. Please listen and take some notes.

As before, concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

#### **NOTES:**

#### **READ AND ACTION (EVERYONE)**

After the demonstration take your data disk and place it in the machine. At this time go up to the APPLE and select your printer. Please make sure that your computer is addressing your data disk (check the DRIVE button).

### **ACTION (MAC II USERS)**

Open the MS WORKS folder and double click on the icon A WORKS TOUR and complete the SPREADSHEET segment. It will take you about 30 minutes to do the tutorial -- please do all of it.

When finished, do a CONTROL Q and click on the QUIT button to exit this Hypercard tutorial.

When you finish the exercise go to the section below marked LAB TASK.

### **ACTION (SE USERS)**

Your machine should be on, if the screen is black just move the mouse a bit and you will see the desktop. Before we can use the tutorial you must do the following first.

Double click on the MICROSOFT ICON on the right side of the desktop. A window will open, and you will see two folders one marked EXCEL and the other marked WORKS. Open the WORKS folder. You will see several icons, open the one called WORKS. Now you will see a window --

Now look to the right of the window and you will see a series of buttons. Click on the one marked DRIVE. As you click (using single clicks) on this button the 'drive' rotates to different icon and even your data disk if it is in the machine. Click on the DRIVE BUTTON until it says STATION.

Open the icon marked A WORKS TOUR and complete the section marked SPREADSHEET. Complete the entire tutorial; it will take you about 30 minutes to do it. When finished, do a CONTROL Q and click on the QUIT button. Now open MS WORKS and open a new spreadsheet document.

When you finish go to the section below marked LAB TASK.

### **Lab Task**

### **ACTION (EVERYONE)**

Now go and open MS WORKS and create an actual SPREADSHEET document. I want each of you to create a spreadsheet for ONE of the following situations.

You may "lay out" your spreadsheet any way you wish. As you enter the data make sure you save it to YOUR DISK. The first time you save it use SAVE AS and name the file CIS101SS.

(PS you may want to refer to the MICROSOFT QUICK GUIDE)

1) Your spreadsheet is to be a sample budget for your upcoming vacation to Lake Tahoe. You will enter in a budget amount and an actual amount (you will really make this up) for various expenses.

Each of you gets \$500.00 for the vacation.

Here are your budgeted expenses:

|                |                    |
|----------------|--------------------|
| Meals          | 20% of your budget |
| Transportation | 20% of your budget |
| Lodging        | 30% of your budget |
| Entertainment  | 30% of your budget |

You can "make up" the actual amount you spend for the above categories. I encourage you to create sub categories -- ie., you may want to separate meals into breakfast, lunch, dinner. Entertainment can also be broken down into categories -- skiing, shows, etc. -- be creative.

You may want to sketch out on paper how you want to layout all of this. Make sure you use text, values, and formulas in appropriate cells.

Here is a sample layout:

**LAKE TAHOE VACATION**  
**March 26 1990**

|                                  | <u>Total Budgeted</u> | <u>Actual Expenses</u> |
|----------------------------------|-----------------------|------------------------|
|                                  | \$2000.00             |                        |
| Transportation                   | 500.00                |                        |
| Car                              |                       | \$150.00               |
| Lodging                          | 300.00                |                        |
| Motel                            |                       | 250.00                 |
| Meals                            | 500.00                |                        |
| Restaurants                      |                       | 175.00                 |
| Groceries                        |                       | 400.00                 |
| Entertainment                    | 700.00                |                        |
| Boat rides                       |                       | 150.00                 |
| Nightclubs                       |                       | 200.00                 |
| Sightseeing                      |                       | 50.00                  |
| Mule rides                       |                       | 100.00                 |
| Gambling                         |                       | 150.00                 |
| Gifts                            | 100.00                |                        |
| Ma & Pa                          |                       | 85.00                  |
| Brother Jim                      |                       | 10.00                  |
| Sister Sue                       |                       | 20.00                  |
| Other Expenses                   | 50.00                 |                        |
| Tire Chains                      |                       | 35.00                  |
| Telephone Calls                  |                       | 12.50                  |
| Vet bill                         |                       | 40.00                  |
| (Dog ate some of the groceries.) |                       |                        |
| <br>Total Budget                 | <br>Total Expenses    | <br>Over/Under         |

2) Create a sample spreadsheet to simulate your checkbook.

PERSONAL BANKING RECORDS-RON SMITH  
March-April

| Check Number | Amount   | Deposit  | Date | Comment    | Balance   |
|--------------|----------|----------|------|------------|-----------|
| 218          | \$205.06 |          | 3/4  | car repair | \$1845.90 |
| 219          | 10.00    | \$200.00 | 3/7  | gift       | 2035.90   |
| -----        | -----    | -----    | ---- | -----      | -----     |

Total Checks: \$ 943.00

Total Deposits: \$2000.90

Current Balance \$----.00

PLEASE MAKE SURE YOU SAVE YOUR SPREADSHEET TO YOUR DATA DISK.

If you did situation 1, then name the file VACATIONSS; if you did the second situation, then name the file CHECKBOOKSS.

Please complete situation One or Two and print your spreadsheet report on either printer (Imagewriter or Laser) and turn in your report to your lab instructor.

## **LAB 6 COMPUTER SCIENCE 101**

### **INTEGRATED APPLICATIONS/MACINTOSH (MAC SE AND/OR MAC II)**

#### **Student Objectives:**

#### **Macintosh Lab Activity:**

1. Be able to use a create/and print an integrated document using MICROSOFT WORKS.
2. Practice using software documentation.

#### **READ/LISTEN**

Your lab instructor will give you an overview of how to create an integrated document with Microsoft WORKS. Your lab instructor will use the Data Show to demonstrate; please listen and take some notes.

As before, concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

#### **NOTES:**

#### **READ AND ACTION (EVERYONE)**

After the demonstration take your data disk and place it in the machine. At this time go up to the finder and select CHOOSER to indicate your printer.

## **ACTION (EVERYONE)**

### **MAC II AND MAC SE USERS**

1. Open WORKS.
2. Using your files ( LETTER1, CIS 101 BD, VACATIONSS, CHECKBOOKSS) that you created over the past several weeks create and print an integrated WORKS report.

You may create the environment for the report; for example, you may want to create a report based on your vacation spreadsheet data (that is, a wordprocessed report in which the spreadsheet is included). You may want to create a document, with graphics, using your database information.

### **BE CREATIVE**

USE YOUR MANUAL – QUICK GUIDE AND REFERENCE GUIDE.

Turn in a printed copy of your report to your lab instructor. Your report should be at least 2-4 pages in length.

Dr. Frasca  
Professor, Computer Science

Week 7

# **LAB 7 COMPUTER SCIENCE 101**

## **APPLICATIONS**

### **Student Objectives:**

1. To review various applications on the Macintosh.
2. To run Mac application software that you have not used before.

### **Macintosh Lab Activity**

#### **READ/LISTEN**

Today's lab is designed to act as an applications lab for any software that you might like to use -ie, a different wordprocessor, paint package, music software, business graphics, etc.

#### **READ AND ACTION (EVERYONE)**

Select your printer.

Use the software list in the lab to select the application package you would like to run OR scan through the various partitions on the hard disk (via the different icons on the desktop) and select your application. For example, if you select the GRAPHICAL icon you will see a paint folder and a draw folder; if you select the MICROSOFT icon you will see the WORKS folder you have been working with and the EXCEL folder.

Use the application you select and also check the documentation on the program (it is in the 'rack' in each lab).

After you use the program answer the questions on the last page and turn in to your lab instructor.

1. Name of the software application? \_\_\_\_\_
2. How would you describe this software?
3. How was the documentation? Was it easy to read and were you able to find the answer to any questions you had? Explain.
4. Did the software meet your needs? Why or why not?

Dr. Frasca  
Professor, Computer Science

# LAB 8 COMPUTER SCIENCE 101

## INTRODUCTION TO PAINT/CLIP ART SOFTWARE MAC SE

### Student Objectives:

1. Be able to use paint software.
2. Be able to use clip art and to edit graphic images.
3. Be able to incorporate computer art into a wordprocessing package (WORKS).
4. Be able to print on a laserwriter printer.

### Macintosh Lab Activity:

#### READ/LISTEN

Your lab instructor will give you an overview of how to create a drawing using the graphic package FULLPAINT. Your lab instructor will also demonstrate how to use pre-packaged art "CLIP ART" with FULLPAINT. Finally, you will be shown how to integrate artwork into a wordprocessing document (WORKS).

Your lab instructor will use the Data Show to demonstrate. Please listen and take some notes.

As before, concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

#### NOTES:

## **READ AND ACTION (EVERYONE)**

After the demonstration take your data disk and place it in the machine. At this time go up to the APPLE and select your printer; in addition, go up to file and pull down to SAVE AS -- now click on the DRIVE button until YOUR DISK NAME is indicated; now you are ready to print and to save onto your data disk. Now click on the cancel button.

## **ACTION (EVERYONE) SE LAB**

In this lab we will explore the use of an application package to do graphics; FULLPAINT. You will be creating a flyer, poster, memo, advertisement, term paper cover, etc.

1. Start out with the original startup screen---no open windows.
2. Insert your data disc into the floppy drive (if you took it out).
3. Open FullPaint-its in the GRAPHICAL volume -- double click on its icon.
4. Create a blank document, name it and save it to your data disc. Make sure you have clicked on DRIVE until you have your data disc.
5. Next, open from the file menu (but do not close Full Paint) and click the drive button until you get to Carson Hall Server in order to open ClipArt.
6. Open Clip Art folder; open one of the four folders that appearS.
7. Pick the page you want---change pages by using Open (FullPaint will let you have four windows open at the same time) and Close in the file menu.
8. Take the lasso or marque (the rectangle) and mark around the object -- this will highlight it.
9. Select COPY from the EDIT menu and then deactivate the object by clicking some place outside the marked area.
10. Now go back to FullPaint by closing Clip Art (and you will now be in FullPaint).

## **ACTION (EVERYONE) Continued**

- 11.** Select PASTE from the EDIT menu -- you may move the object by placing the cursor inside the marked area and dragging it to where you want it. Just click outside the area and it will deactivate the paste process.
- 12.** Now try to make some modification of your own; use the paint brush, spray can, etc.; feel free to go back to clip art and get another object of art and paste it in with the one you just created.
- 13.** Use the FullPaint tool to create text (you will see it is not like a wordprocessor).
- 14.** Save your picture to your data disk.
- 15.** Print your document
- 16.** Quit, close windows, restart if you are done with the computer.

(feel free to look at the examples of clip art in the book racks)

-----

Please follow the instructions below:

Create a document using FullPaint with one or more objects of art from ClipArt. Print it on the Imagewriter and optionally on the Laserprinter. This is to be a coordinated picture with text -- think about it before doing it.

- A. Select a picture/s from ClipArt (you can modify it if you want) and create a document around it.
- B. Create a main title and a "short" story of at least five to ten meaningful sentences about the picture -- all in the same document.

Here are some possible "themes" for your document:

My most memorable experience  
Life before (or after) CIS 101  
Term paper cover for another class  
What you are going to do during the Spring break  
What you did over the past semester break  
Your favorite pet story (with art of the pet)

- C. Use different fonts, sizes, etc. -- use items from the tool palette, pattern palette -- be creative, imaginative, ingenious!
- D. Use the entire page---Use SHOW PAGE in the GOODIES menu.
- E. Put you name on the drawing using FullPaint.

**NOTES:**

If you have problems or get in trouble, use the following resources:

MacPaint (similar to FullPaint) tutorial on Software Sampler Disc -- must get from consultant when in lab

FullPaint reference manuals in the lab

Lab instructor, classmates, lab consultant (if any in the lab)

Help line 2907

ClipArt index in book rack in lab

Dr. Frasca  
Professor, Computer science

Week 9

# **LAB 9 COMPUTER SCIENCE 101**

## **INTRODUCTION TO HYPERCARD MAC SE/MAC II**

### **Student Objectives:**

1. Be able to use the Hypercard tutorial.
2. Use Hypercard interfaced to a videodisc unit.

### **Macintosh Lab Activity:**

#### **READ/LISTEN**

Your lab instructor will give you an overview of Hypercard and how to use it; you will be using a tutorial for Hypercard before you do your own exercise.

Your lab instructor will use the Data Show to demonstrate. Please listen and take some notes.

As before, concepts and skills will be reinforced when you use the software tutorial and practice using the machines in just a few minutes.

#### **ACTION:**

Find the Hypercard folder and open it; open the "stack" marked HYPERCARD; in a few seconds you will see a window with many icons on it. Just move the cursor and click once on the label marked INTRO.

Now just follow the instructions; remember, when in Hypercard just "single click". Do the introduction; when finished, stop and close all your windows.

The second part of lab will show you an application of Hypercard. It will be completed in the Multimedia Lab.

**NOTES:**

**READ AND ACTION (EVERYONE)**

After the lab instructor has finished the demonstration, break into two groups; half work with the Pioneer 2000 (you may use any disk from the collection -- see your handout) and answer questions (sheets attached) on the Salamander, Bio-Science, or Earth Science disk. Hand in your work to the lab instructor. The other half using the Pioneer 4200 are to use the National Gallery or Van Gogh disk with Hypercard (just access the videodisc folder and then specify stacks.) See attached inventory and work sheets. You may also use the Pioneer 2200 unit.

**ACTION (EVERYONE)**

**NOTES:**

If you have problems or get in trouble, use the following resources:

LAB INSTRUCTOR, CLASSMATES, LAB CONSULTANT (IF ANY IN THE LAB)

HELP LINE 2907

Dr. Frasca  
Professor, Computer science

Week 10

|    | A                                                   | B                                  | C    |
|----|-----------------------------------------------------|------------------------------------|------|
| 1  | VIDEODISC                                           | CURRICULUM AREA                    | TYPE |
| 2  |                                                     |                                    |      |
| 3  |                                                     |                                    |      |
| 4  | America & the World Since WWII 45-52                | Multi cultl, soc sci, reading      | CLV  |
| 5  | America & the World Since WWII 53-60                | Multi cultl, soc sci, reading      | CLV  |
| 6  | America & the World Since WWII 61-75                | Multi cultl, soc sci, reading      | CLV  |
| 7  | America & the World Since WWII 76-85                | Multi cultl, soc sci, reading      | CLV  |
| 8  | Andrew Wyeth: The Helga Pictures                    | Art                                | CAV  |
| 9  | Basic Spanish Laser Disc                            | Bilingual, multi cultl             | CLV  |
| 10 | Bioscience Disc                                     | Bioscience, bilingual              | CAV  |
| 11 | Citizen Kane                                        | reading, film studies              | CAV  |
| 12 | Delaware Music Series                               | Multi cultl, music                 | CAV  |
| 13 | Discourse: A Negotiated Agreement                   | Management                         | CAV  |
| 14 | Don Quixote                                         | Dance, multi cultl, soc sci        | CLV  |
| 15 | Earth Science: Geology & Meteorology                | Earth Science (Seody)              | CAV  |
| 16 | Egypt, Quest for Eternity                           | Multi cultl, soc sci               | CLV  |
| 17 | Elementary Science-Earth Science                    | Earth Science (Elem)               | CAV  |
| 18 | Encounters-Halley's Comet & Uranus                  | Astronomy, Physics                 | CAV  |
| 19 | Encyclopedia of Animals-Vol 8 Marine Life           | Biology                            | CAV  |
| 20 | Greetings from Earth                                | Earth Science                      | CAV  |
| 21 | Jerusalem, Within These Walls                       | Multi cultl, soc sci               | CLV  |
| 22 | King Kong                                           | Film Studies, reading              | CAV  |
| 23 | Louvre, Vol 1: Paintings and Drawings               | Art, multi cultl, reading          | CAV  |
| 24 | Louvre, Vol 2: Sculpture and Objets d'art           | Art, multi cultl, reading          | CAV  |
| 25 | Louvre, Vol 3: Antiquities (Greek, Roman, Egyptian) | Art, multi cultl, reading          | CAV  |
| 26 | Madam Butterfly                                     | Musical, multi cultl, soc sci      | CLV  |
| 27 | Miniature Miracle-Computer Chip                     | computer education                 | CLV  |
| 28 | National Gallery of Art                             | Ely Child, multi cultl, art        | CAV  |
| 29 | Planetscape                                         | Earth Science, astronomy           | CAV  |
| 30 | Regard for the Planet                               | Multi cultl, soc sci, reading, art | CAV  |
| 31 | Salamandre: Chateaux of the Loire                   | Bilingual, multi cultl, soc sci    | CAV  |
| 32 | Space Odyssey -2001                                 | Film, computer graphics            | CAV  |
| 33 | Star Wars                                           | Film studies, computer graphics    | CAV  |
| 34 | State of the Art of Computer Animation              | computer graphics/animation        | CAV  |
| 35 | The '88 Vote-Campaign for the White House           | Social Science, Political Sci      | CAV  |
| 36 | The Computing Technology Videodisc                  | computer education                 | CAV  |
| 37 | The Incredible Story Disk                           | Ely Child, reading                 | CAV  |
| 38 | The Magnificent Ambersons                           | reading, film studies              | CAV  |
| 39 | The Mikado                                          | Musical, multi cultl, soc sci      | CLV  |
| 40 | The Mystery of Picasso                              | Art, multi cultl, reading          | CLV  |
| 41 | The Power of Myth                                   | Mythology, reading                 | CLV  |
| 42 | The Vancouver Disc                                  | Multi cultl, soc sci               | CAV  |
| 43 | The Wizard of OZ                                    | Early Childhood, reading, film     | CAV  |
| 44 | Theatre of the Imagination                          | Reading, story telling             | CLV  |
| 45 | Van Gogh Revisited                                  | Art, multi cultl, reading          | Both |
| 46 | Vietnam, Vol 1: Dien Bien Phu                       | Multi cultl, soc sci               | CLV  |
| 47 | Vietnam, Vol 2: Days of Decision, Uneasy Allies     | Multi cultl, soc sci               | CLV  |
| 48 | Vietnam, Vol 3: The Trial, Fire Power               | Multi cultl, soc sci               | CLV  |
| 49 | Vietnam, Vol 4: Surrender, Usung Soldiers           | Multi cultl, soc sci               | CLV  |
| 50 | Vietnam, Vol 5: The Village War, Peace              | Multi cultl, soc sci               | CLV  |
| 51 | Vietnam, Vol 6: Siege, Frontline America            | Multi cultl, soc sci               | CLV  |
| 52 | Voyager Gallery                                     | Astronomy                          | CAV  |
| 53 |                                                     |                                    |      |
| 54 |                                                     |                                    |      |
| 55 |                                                     |                                    |      |
| 56 | Dr. Frasca/vdisc                                    |                                    |      |

# LAB 10 COMPUTER SCIENCE 101

## INTRODUCTION TO APPLE IIe BASIC OPERATIONS

### Student Objectives:

1. Be able to do a cold and warm boot on the Apple IIe workstation.
2. Complete the tutorial Apple Presents Apple.
3. Initialize/format a new disk.

### Apple IIe Activity:

#### READ/LISTEN

Your lab instructor will give you an overview of Apple II environment to include how to turn on, start and stop the disk drive/s, plus an overview of basic DOS 3.3 commands.

The lab has both Apple IIe and Apple II GS computers. A few basic differences are the IIes are networked to a Corvus file server in the room, they use DOS 3.3 operating system, and they use a 5 1/4 in floppy disk drive. The Apple II GS (means Graphics and Sound) run both DOS and PRO DOS operating systems, uses both 3 and 5 1/4 floppy disk drives, and they are not connected to the Corvus network. There are other differences but they are not critical to our exercise today.

While we are using the Apple IIs you will want to refer to your lab manual -- starting on page 34 there is a large section on the Apple environment. While we are in the lab on this environment we will deal with several items: basic use of the machine, learning DOS commands, formatting a disk on the Apple, running some system utilities, experimenting with the languages like BASIC and LOGO, and using the printers.

#### BOOTING A DISK

The following procedures will boot a disc on the Apple II in this lab :

- A. Turn the machine on the machine (monitor should be on -- caplock key is down).

- B. Hold down the CONTROL KEY (left side of keyboard) while at the same time press RESET key (upper right).

You will now have a prompt (looks like a reverse c) and a blinking cursor (square).

- C. Put the disc (can be any type of disk that has been formatted--ie, a tutorial, wordprocessor, database, etc.) in the disc drive.
- D. Type PR#6 and press the RETURN KEY.

NOTE: THERE ARE SEVERAL METHODS FOR BOOTING A STAND-ALONE APPLE STATED IN THE MANUAL ON PP 39-40. LOOK AT YOUR WORKSTATION -- IF IT SAYS YOU ARE ON THE CORVUS NETWORK, THESE METHODS WILL NOT WORK. HOWEVER, (A) THRU (D) WILL WORK ON ALL APPLE II MACHINES.

### **ACTION**

Find the disk entitled "APPLE PRESENTS APPLE"; this tutorial will take you through the basic keyboard operation of the Apple. Boot the disc and go thru as much as possible of the tutorial. Make sure you do menu item #9.

If you press the ESC key it will take you back to the main menu.

### **TO STOP THE TOUR OF THE APPLE:**

Take the disc out (make sure the red light on the disk drive is not on -- it means the disk is in use). Turn the computer off.

### **ANSWER THE FOLLOWING**

How do you do a cold boot?

\_\_\_\_\_

How do you do a warm boot?

\_\_\_\_\_

### **ACTION**

### **FORMATTING A DISK**

Your lab instructor has given a demonstration of how to format a disk on the Apple II; now its your turn.

Take your blank disc and place it in the disk drive.

#### **FORMATTING-Short Method**

1. Boot the disk marked SYSTEM MASTER.
2. When you have the prompt and cursor take out the SYSTEM MASTER and type the command NEW followed by a RETURN KEY we will call it <CR>  
NEW <CR>
3. Put your blank disk in the disk drive.
4. Type the command INIT HELLO followed by a RETURN KEY  
INIT HELLO <CR>

Just wait a while and the disk drive will stop (the light will go off), and now the disk is initialized/formatted.

Now boot you disk (ie -- a warm boot) do a PR#6 and see what happens.

#### **FORMATTING-Long Method**

Now lets try it again but this time we will create our own program to enter into the machine and will use it as the vehicle by which we reformat the disk.

1. Make sure your disk is in the drive.
2. Type the command NEW  
NEW <CR>
3. Now enter the following (make sure the CAP LOCK is down):

```
05 HOME
10 PRINT "typeyournamehere"
20 PRINT
30 PRINT "MY FIRST PROGRAM"
40 PRINT "    CIS    "
50 END
```

4. Now type the command LIST to see what you have typed  
LIST <CR>
5. Now type the command RUN  
RUN <CR>  
(This will run your program on the machine)

6. Now type the command INIT HELLO  
INIT HELLO <CR>

7. After the disk has stopped re boot the disk with a PR#6.

### **ANSWER**

What happens when the disk is rebooted? \_\_\_\_\_

What is different in this method and the first one you did?  
\_\_\_\_\_

### **ACTION**

If you have any time left I would like each of you to try to reformat your disk a third time, but use the program and follow the instructions on page 37 of the lab manual.

### **NOTES:**

If you have problems or get in trouble, use the following resources:

LAB INSTRUCTOR, CLASSMATES, LAB MANUAL

Dr. Frasca  
Professor, Computer Science

Week 11

# LAB 11 COMPUTER SCIENCE 101

## INTRODUCTION TO APPLE IIe

### Student Objectives:

1. Initialize/format a new disk using both short and long formats.
2. Be able to use basic DOS 3.3 commands. (LOAD, SAVE, LOCK , UNLOCK, CATALOG, BLOAD, BRUN, RENAME, DELETE) and BASIC commands (RUN, LIST, HOME, ETC.).
3. To be able to copy an Apple DOS disk; use the FID file utility program to copy B and T type files.

### Apple IIe Activity:

#### READ/LISTEN

Your lab instructor will give you an overview of Apple II environment to include how to turn on, start and stop the disk drive/s, and an overview of basic DOS 3.3 commands. Most of this will be a review of last week.

While we are using the Apple IIs you will want to refer to you lab manual -- starting on page 34 there is a section on the Apple environment. While we are in the lab on this environment we will deal with several items: basic use of the machine, learning DOS commands, formatting a disk on the Apple, running some system utilities, experimenting with the languages BASIC and LOGO, and using the printers.

#### ACTION

##### FORMATTING A DISK <Review From Last Week>

Your lab instructor has given a demonstration of how to format a disk on the Apple II; now its your turn.

Take your blank disc and place it in the disk drive.

### FORMATTING-Short Method

1. Boot the disk marked SYSTEM MASTER.
2. When you have the prompt and cursor take out the SYSTEM MASTER and type the command NEW followed by a RETURN KEY we will call it <CR>  
NEW <CR>
3. Put your blank disk in the disk drive.
4. Type the command INIT HELLO followed by a RETURN KEY  
INIT HELLO <CR>

Just wait a while and the disk drive will stop (the light will go off), and now the disk is initialized/formatted.

Now boot you disk (ie -- a warm boot) do a PR#6 and see what happens.

### FORMATTING-Long Method

Now lets try it again but this time we will create our own program to enter into the machine and will use it as the vehicle by which we reformat the disk.

1. Make sure your disk is in the drive.
2. Type the command NEW  
NEW <CR>
3. Now enter the following (make sure the CAP LOCK is down):  

```
05 HOME
10 PRINT "typeyournamehere"
20 PRINT
30 PRINT "MY FIRST PROGRAM"
40 PRINT "    CIS    "
50 END
```
4. Now type the command LIST to see what you have typed  
LIST <CR>
5. Now type the command RUN  
RUN <CR>  
(This will run your program on the machine.)

6. Now type the command INIT HELLO  
INIT HELLO <CR>

7. After the disk has stopped reboot the disk with a PR#6.

### **ACTION**

#### **LET'S TRY THIS ONE MORE TIME.**

Reformat your disk a third time but use the program and follow the instructions on page 37 of the lab manual. This is a short program in Applesoft BASIC which will do an automatic "CATALOG" of your disk (no matter how many programs you have on it) when it is booted. Here are some notes on the program.

line 10 clears the screen and prints John Smith 12 places from the left of the screen.

line 20 tabs over 9 places and prints "Apple....."

line 30 prints a blank line.

line 40 tabs over 12 places and prints the word CATALOG on the screen.

line 50 is a special line which invokes the DOS command CATALOG from within the program; it is like I typed the word CATALOG and pressed the RETURN KEY.

LINE 60 indicates that this is the end of the program.

### **ACTION**

After you have finished reinitializing your disk go to page 35 of your lab manual and review the DOS commands at the top of the page then (leave your disk in the machine) and type NEW and enter in the short program on page 35. Be creative -- put your name in line 40 rather than John Doe. Also put in line 5 HOME this will clear the screen before your program runs with your other output.

If you want to delete a line just type the line number 10, or if you make a mistake, just use the left arrow key and type in the correct information; if you make a mistake and have entered the RETURN KEY just retype the entire line.

Now just follow the paragraph on page 35 and 36 and follow the instructions; when you finish write in on page 36 what each of the DOS commands does. For your review I have placed a summary of the DOS commands on page 38 of the manual.

-----

### **ACTION**

The use of the COPYA and FID programs were demonstrated in lab. Using page 47 of your manual copy the SYSTEM MASTER DISK and then using any B or T file, use the FID program copy the program.

### **NOTES:**

If you have problems or get in trouble, use the following resources:

LAB INSTRUCTOR, CLASSMATES, LAB MANUAL

Dr. Frasca  
Professor, Computer science

Week 12

# LAB 12 COMPUTER SCIENCE 101

## APPLE IIe LANGUAGES

### Student Objectives:

1. Enter, edit, save, and run programs in Applesoft BASIC.
2. Enter, edit, save, and run programs in Apple LOGO.
3. Appreciate differences in structured vs. unstructured implementation of computer languages.
4. Review use of COPYA and FID utility programs.

### Apple IIe Activity:

#### READ/LISTEN

Your lab instructor will demonstrate how to enter, edit, save, and run computer programs in Applesoft BASIC and if time permits, in Apple LOGO. Follow along in the demonstration.

#### ACTION

Your lab instructor will give you a set of programs to enter, edit, save, and run. Save them on to your disk that you initialized last week. See attached set of Applesoft BASIC programs.

#### NOTE:

When you enter and run programs in Applesoft BASIC you can do this because the language is built into ROM on the Apple IIe.

When you go to enter and run programs in LOGO you will need to boot the LOGO MASTER disk (so marked) with a PR#6.

When you see the flashing cursor on the screen just press the RETURN KEY and the rest of the disk contents will be loaded for LOGO.

You will see the following:

WELCOME TO LOGO

?

You can now take the disk out and start to enter LOGO programs. Your lab instructor will pass out the programs. See attached LOGO programs.

Have fun with the programs.

#### NOTES:

If you have problems or get in trouble, use the following resources:

LAB INSTRUCTOR, CLASSMATES, LAB MANUAL

Dr. Frasca  
Professor, Computer science

Week 13

# LAB 13 COMPUTER SCIENCE 101

## APPLE IIe/GS APPLICATION SOFTWARE

### Student Objectives:

1. Run application software on the Apple II environment.
2. Be able to read/use user documentation.
3. Enter, edit, and run LOGO programs.

### Apple IIe Activity:

#### ACTION

1. Go to the Reserve Room of the library and select a software application from the inventory list. See last week's list.
2. Once you have found software that you would like to use go back to the Apple lab and run the software. Make sure that you look at the user documentation.
3. As you use the software and the documentation answer the following questions:
  - A. How much memory does this application need to run on the machine?  
\_\_\_\_\_
  - B. How many disk drives/any special peripherals?  
\_\_\_\_\_
  - C. Does the software come with a backup copy of the software?  
\_\_\_\_\_

**APPLE IIe ACTIVITY Continued:**

D. Can a backup copy be made of the software?

---

E. What version of the software is the application?

---

F. What comments do you have to make about the quality/useability of the software?

G. The documentation?

H. Would you buy this software for your use at home or at your job? Why? Why not?

I. What software did you use?

**NOTES:**

If you have problems or get in trouble, use the following resources:

**SOFTWARE USER GUIDE**

# **LAB 14 COMPUTER SCIENCE 101**

## **HOW TO PURCHASE A COMPUTER**

### **Student Objectives:**

### **Apple IIe Activity:**

#### **ACTION**

Today you will actually be in a discussion lab. The two questions which I want you to discuss are:

**HOW SHOULD I GO ABOUT PURCHASING A COMPUTER -- WHAT SHOULD I LOOK FOR?**

Break up into groups of three or four and present your criteria with adequate rationale.

In part two, your instructor will give you several situations in which unethical actions are discovered. Please take a few minutes to jot down some notes and then prepare an oral response.

#### **NOTES:**

If you have problems or get in trouble, use the following resources:

**NOTES ... USE THIS SPACE TO TAKE SOME NOTES**

Dr. Frasca  
Professor, Computer Science

Week 15